REMARKS

Claims 1-4, 7-10 and 12-17 stand rejected under 35 USC 102(b) as being anticipated by US6445101 to Ley (hereinafter "Ley"). Claims 5, 6 and 11 stand rejected under 35 USC 103(a) as being obvious over Ley in view of US6329783 to Vrionis et al. (hereinafter "Vrionis"). Applicant has amended the claims of the present application to more particularly define the present invention over the cited prior art.

More specifically, claim 1 as amended is directed to a permanent magnet brushless motor comprising a stator with one or more phases, wherein a given phase includes a plurality of winding sections. A rotor is rotatably mounted relative to the stator and comprises at least one permanent magnet. Switch means comprising a plurality of switching devices provides for **simultaneously connecting all of the winding sections of the given phase in one of a plurality of different configurations. The switching devices are disposed at opposite ends of each winding section and are arranged to connect each winding section in series and/or parallel with all other winding sections of the given phase.** (emphasis added)

The permanent magnet brushless motor of the present invention operates in an entirely different manner to the conventional induction motors disclosed in Ley and Vrionis. In induction motors, the windings are switched to vary the number of magnetic poles, whereas the present invention has a fixed number of poles determined by the

number of permanent magnets on the rotor. In the present invention, the windings are switched to vary the inductance and not the number of poles. Another important distinction of the present invention is that ALL of the winding sections of a given phase are SIMULTANEOUSLY connected in a desired configuration during operation of the motor. In contrast, the induction motors of the kind disclosed in Ley and Vrionis use redundant windings as described below in detail.

Ley discloses a conventional induction motor having a stator (see Fig 4) divided into main windings 90, 92 and start windings 80, 82 respectively shown on the left and right sides of Fig 4. In use, power is initially connected between T1/T4 and T2/T3/T6: in this configuration the start windings 82 are out of circuit and redundant and the start windings 80 are in parallel with the main windings 90, 92 (see column 4, lines 19-23). Power is then connected between T3/T5 and T2/T6: in this configuration the windings 94 are redundant and not part of the circuit, and the main windings 90, 92 and start windings 80, 82 are in parallel (see column 4, lines 25-28). Thus, it is not possible to simultaneously connect all of the windings of the circuit either in series and/or parallel as there are redundant windings in both configurations. These redundant windings are not connected to the other windings of the circuit in either a series or parallel fashion.

Vrionis discloses a conventional induction motor comprising a main winding having two sections ("Main 1", "Main 2") and an auxiliary winding ("Aux"). A triac switch T1 is connected between the inputs of the main winding sections "Main 1" and "Main 2". A triac switch T2 is connected between the outputs of the main winding

sections "Main 1" and "Main 2". A triac switch T3 is connected between the output of main winding section "Main 2" and the input of the main winding section "Main 1". The Auxiliary winding "Aux" is not switched and is always connected in parallel across the main winding sections "Main 1" and "Main 2". Importantly, Vrionis cannot simultaneous connect all of the windings "Main 1", "Main 2" and "Aux" in series and/or parallel as the auxiliary winding "Aux" is not switched and is always connected in parallel across "Main 1" and "Main 2".

For these reasons, Applicant respectfully submits that the cited prior art fails to teach or suggest important limitations of claim 1. Moreover, the cited prior art fails to disclose a permanent magnet brushless motor in which the switching devices are disposed at opposite ends of each winding section of a given phase of the stator and are arranged to connect each winding section in series and/or parallel with all other winding sections of the given phase of the stator as recited in claim 1.

The dependent claims 2-17 are patentable over the cited prior art for those reasons advanced above with respect to claim 1 from which they respectively depend and for reciting additional features that are neither taught nor suggested by the cited prior art.

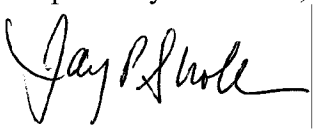
For example, claim 2 recites that the switch means is arranged to **connect all of the winding sections of the given phase in parallel**. (emphasis added) In another example, claim 3 recites that the switch means is arranged to **connect all of the winding sections of the given phase in series.** (emphasis added) In yet another example, claim 4

recites that the switch means is arranged to **connect some of the winding sections of the given phase in parallel, with at least one other winding section of the given phase being connected in series with the parallel-connected winding sections**. (emphasis added) Nowhere does the cited prior art teach or suggest these features.

In another example, claim 16 recites that **one of the winding sections of the given phase comprises a different number of turns from another winding section of the given phase**. (emphasis added) Claim 17 recites that **one of the winding sections of the given phase comprises a conductor having a different cross-sectional area than the conductor of another winding section of the given phase**. (emphasis added) Nowhere does the cited prior art teach or suggest these features.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



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